SEQUENCE LISTING

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KANAI, Yoshikatsu
SEKINE, Takashi
HOSOYAMADA, Makoto

<120> ORGANIC ANION TRANSPORTER AND GENE
CODING FOR THE SAME

<130> 49429 (71526)

<140> 09/424,347
<141> 2000-07-18

<150> PCT/JP98/02171
<151> 1998-05-18

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ccagcgaagg acagcaggca ggcagacaga cagaggtcct gggactggaa ggcctcagcc     240
cccagccact gggctgggcc tggccca atg gcc ttt aat gac ctc ctg cag cag     294
                               Met Ala Phe Asn Asp Leu Leu Gln Gln
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gtg ggg ggt gtc ggc cgc ttc cag cag atc cag gtc acc ctg gtg gtc     342
Val Gly Gly Val Gly Arg Phe Gln Gln Ile Gln Val Thr Leu Val Val
 10              15                  20                  25

ctc ccc ctg ctc ctg atg gct tct cac aac acc ctg cag aac ttc act     390
Leu Pro Leu Leu Leu Met Ala Ser His Asn Thr Leu Gln Asn Phe Thr
                 30                  35                  40

gct gcc atc cct acc cac cac tgc cgc ccg cct gcc gat gcc aac ctc     438
Ala Ala Ile Pro Thr His His Cys Arg Pro Pro Ala Asp Ala Asn Leu
                 45                  50                  55

agc aag aac ggg ggg ctg gag gtc tgg ctg ccc cgg gac agg cag ggg     486
Ser Lys Asn Gly Gly Leu Glu Val Trp Leu Pro Arg Asp Arg Gln Gly
         60                  65                  70
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cag cct gag tcc tgc ctc cgc ttc acc tcc ccg cag tgg gga ctg ccc          534
Gln Pro Glu Ser Cys Leu Arg Phe Thr Ser Pro Gln Trp Gly Leu Pro
    75                          80                      85

ttt ctc aat ggc aca gaa gcc aat ggc aca ggg gcc aca gag ccc tgc          582
Phe Leu Asn Gly Thr Glu Ala Asn Gly Thr Gly Ala Thr Glu Pro Cys
90              95                      100                     105

acc gat ggc tgg atc tat gac aac agc acc ttc cca tct acc atc gtg          630
Thr Asp Gly Trp Ile Tyr Asp Asn Ser Thr Phe Pro Ser Thr Ile Val
                    110                     115                 120

act gag tgg gac ctt gtg tgc tct cac agg gcc cta cgc cag ctg gcc          678
Thr Glu Trp Asp Leu Val Cys Ser His Arg Ala Leu Arg Gln Leu Ala
                125                     130                 135

cag tcc ttg tac atg gtg ggg gtg ctg ctc gga gcc atg gtg ttc ggc          726
Gln Ser Leu Tyr Met Val Gly Val Leu Leu Gly Ala Met Val Phe Gly
            140                     145                 150

tac ctt gca gac agg cta ggc cgc cgg aag gta ctc atc ttg aac tac          774
Tyr Leu Ala Asp Arg Leu Gly Arg Arg Lys Val Leu Ile Leu Asn Tyr
        155                     160                 165

ctg cag aca gct gtg tca ggg acc tgc gca gcc ttc gca ccc aac ttc          822
Leu Gln Thr Ala Val Ser Gly Thr Cys Ala Ala Phe Ala Pro Asn Phe
170                     175                 180                 185

ccc atc tac tgc gcc ttc cgg ctc ctc tcg ggc atg gct ctg gct ggc          870
Pro Ile Tyr Cys Ala Phe Arg Leu Leu Ser Gly Met Ala Leu Ala Gly
                190                     195                 200

atc tcc ctc aac tgc atg aca ctg aat gtg gag tgg atg ccc att cac          918
Ile Ser Leu Asn Cys Met Thr Leu Asn Val Glu Trp Met Pro Ile His
                205                     210                 215

aca cgg gcc tgc gtg ggc acc ttg att ggc tat gtc tac agc ctg ggc          966
Thr Arg Ala Cys Val Gly Thr Leu Ile Gly Tyr Val Tyr Ser Leu Gly
        220                     225                 230

cag ttc ctc ctg gct ggt gtg gcc tac gct gtg ccc cac tgg cgc cac          1014
Gln Phe Leu Leu Ala Gly Val Ala Tyr Ala Val Pro His Trp Arg His
235                     240                     245

ctg cag cta ctg gtc tct gcg cct ttt ttt gcc ttc ttc atc tac tcc          1062
Leu Gln Leu Leu Val Ser Ala Pro Phe Phe Ala Phe Phe Ile Tyr Ser
250                     255                 260                 265

tgg ttc ttc att gag tcg gcc cgc tgg cac tcc tcc tcc ggg agg ctg          1110
Trp Phe Phe Ile Glu Ser Ala Arg Trp His Ser Ser Ser Gly Arg Leu
                270                     275                 280

gac ctc acc ctg agg gcc ctg cag aga gtc gcc cgg atc aat ggg aag          1158
Asp Leu Thr Leu Arg Ala Leu Gln Arg Val Ala Arg Ile Asn Gly Lys
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cgg gaa gaa gga gcc aaa ttg agt atg gag gta ctc cgg gcc agt ctg          1206
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Arg Glu Glu Gly Ala Lys Leu Ser Met Glu Val Leu Arg Ala Ser Leu
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cag aag gag ctg acc atg ggc aaa ggc cag gca tcg gcc atg gag ctg        1254
Gln Lys Glu Leu Thr Met Gly Lys Gly Gln Ala Ser Ala Met Glu Leu
        315                 320                 325

ctg cgc tgc ccc acc ctc cgc cac ctc ttc ctc tgc ctc tcc atg ctg        1302
Leu Arg Cys Pro Thr Leu Arg His Leu Phe Leu Cys Leu Ser Met Leu
330                 335                 340                 345

tgg ttt gcc act agc ttt gca tac tat ggg ctg gtc atg gac ctg cag        1350
Trp Phe Ala Thr Ser Phe Ala Tyr Tyr Gly Leu Val Met Asp Leu Gln
                350                 355                 360

ggc ttt gga gtc agc atc tac cta atc cag gtg atc ttt ggt gct gtg        1398
Gly Phe Gly Val Ser Ile Tyr Leu Ile Gln Val Ile Phe Gly Ala Val
                365                 370                 375

gac ctg cct gcc aag ctt gtg ggc ttc ctt gtc atc aac tcc ctg ggt        1446
Asp Leu Pro Ala Lys Leu Val Gly Phe Leu Val Ile Asn Ser Leu Gly
        380                 385                 390

cgc cgg cct gcc cag atg gct gca ctg ctg ctg gca ggc atc tgc atc        1494
Arg Arg Pro Ala Gln Met Ala Ala Leu Leu Leu Ala Gly Ile Cys Ile
        395                 400                 405

ctg ctc aat ggg gtg ata ccc cag gac cag tcc att gtc cga acc tct        1542
Leu Leu Asn Gly Val Ile Pro Gln Asp Gln Ser Ile Val Arg Thr Ser
410                 415                 420                 425

ctt gct gtg ctg ggg aag ggt tgt ctg gct gcc tcc ttc aac tgc atc        1590
Leu Ala Val Leu Gly Lys Gly Cys Leu Ala Ala Ser Phe Asn Cys Ile
                430                 435                 440

ttc ctg tat act ggg gaa ctg tat ccc aca atg atc cgg cag aca ggc        1638
Phe Leu Tyr Thr Gly Glu Leu Tyr Pro Thr Met Ile Arg Gln Thr Gly
                445                 450                 455

atg gga atg ggc agc acc atg gcc cga gtg ggc agc atc gtg agc cca        1686
Met Gly Met Gly Ser Thr Met Ala Arg Val Gly Ser Ile Val Ser Pro
        460                 465                 470

ctg gtg agc atg act gcc gag ctc tac ccc tcc atg cct ctc ttc atc        1734
Leu Val Ser Met Thr Ala Glu Leu Tyr Pro Ser Met Pro Leu Phe Ile
        475                 480                 485

tac ggt gct gtt cct gtg gcc gcc agc gct gtc act gtc ctc ctg cca        1782
Tyr Gly Ala Val Pro Val Ala Ala Ser Ala Val Thr Val Leu Leu Pro
490                 495                 500                 505

gag acc ctg ggc cag cca ctg cca gac acg gtg cag gac ctg gag agc        1830
Glu Thr Leu Gly Gln Pro Leu Pro Asp Thr Val Gln Asp Leu Glu Ser
                510                 515                 520

agg tgg gcc ccc act cag aaa gaa gca ggg ata tat ccc agg aaa ggg        1878
Arg Trp Ala Pro Thr Gln Lys Glu Ala Gly Ile Tyr Pro Arg Lys Gly
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                        525              530              535
     aaa cag acg cga cag caa caa gag cac cag aag tat atg gtc cca ctg     1926
     Lys Gln Thr Arg Gln Gln Gln Glu His Gln Lys Tyr Met Val Pro Leu
              540                   545                   550

     cag gcc tca gca caa gag aag aat gga ctc tgaggactga gaaggggcct        1976
     Gln Ala Ser Ala Gln Glu Lys Asn Gly Leu
         555                   560

     tacagaaccc taaagggagg gaaggtccta caggtctccg gccacccaca caaggaggag    2036
     gaagaggaaa tggtgaccca agtgtggggg ttgtggttca ggaaagcatc ttcccagggg    2096
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                 20                  25                  30
     Ser His Asn Thr Leu Gln Asn Phe Thr Ala Ala Ile Pro Thr His His
             35                  40                  45
     Cys Arg Pro Pro Ala Asp Ala Asn Leu Ser Lys Asn Gly Gly Leu Glu
         50                  55                  60
     Val Trp Leu Pro Arg Asp Arg Gln Gly Gln Pro Glu Ser Cys Leu Arg
     65                  70                  75                  80
     Phe Thr Ser Pro Gln Trp Gly Leu Pro Phe Leu Asn Gly Thr Glu Ala
                     85                  90                  95
     Asn Gly Thr Gly Ala Thr Glu Pro Cys Thr Asp Gly Trp Ile Tyr Asp
                 100                 105                 110
     Asn Ser Thr Phe Pro Ser Thr Ile Val Thr Glu Trp Asp Leu Val Cys
             115                 120                 125
     Ser His Arg Ala Leu Arg Gln Leu Ala Gln Ser Leu Tyr Met Val Gly
         130                 135                 140
     Val Leu Leu Gly Ala Met Val Phe Gly Tyr Leu Ala Asp Arg Leu Gly
     145                 150                 155                 160
     Arg Arg Lys Val Leu Ile Leu Asn Tyr Leu Gln Thr Ala Val Ser Gly
                     165                 170                 175
     Thr Cys Ala Ala Phe Ala Pro Asn Phe Pro Ile Tyr Cys Ala Phe Arg
                 180                 185                 190
     Leu Leu Ser Gly Met Ala Leu Ala Gly Ile Ser Leu Asn Cys Met Thr
             195                 200                 205
     Leu Asn Val Glu Trp Met Pro Ile His Thr Arg Ala Cys Val Gly Thr
         210                 215                 220
     Leu Ile Gly Tyr Val Tyr Ser Leu Gly Gln Phe Leu Leu Ala Gly Val
     225                 230                 235                 240
     Ala Tyr Ala Val Pro His Trp Arg His Leu Gln Leu Leu Val Ser Ala
                     245                 250                 255
     Pro Phe Phe Ala Phe Phe Ile Tyr Ser Trp Phe Phe Ile Glu Ser Ala
                 260                 265                 270
     Arg Trp His Ser Ser Ser Gly Arg Leu Asp Leu Thr Leu Arg Ala Leu
             275                 280                 285
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Gln Arg Val Ala Arg Ile Asn Gly Lys Arg Glu Glu Gly Ala Lys Leu
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Ser Met Glu Val Leu Arg Ala Ser Leu Gln Lys Glu Leu Thr Met Gly
305             310                 315                 320
Lys Gly Gln Ala Ser Ala Met Glu Leu Leu Arg Cys Pro Thr Leu Arg
            325                 330                 335
His Leu Phe Leu Cys Leu Ser Met Leu Trp Phe Ala Thr Ser Phe Ala
        340                 345                 350
Tyr Tyr Gly Leu Val Met Asp Leu Gln Gly Phe Gly Val Ser Ile Tyr
        355                 360                 365
Leu Ile Gln Val Ile Phe Gly Ala Val Asp Leu Pro Ala Lys Leu Val
        370                 375                 380
Gly Phe Leu Val Ile Asn Ser Leu Gly Arg Arg Pro Ala Gln Met Ala
385             390                 395                 400
Ala Leu Leu Leu Ala Gly Ile Cys Ile Leu Leu Asn Gly Val Ile Pro
            405                 410                 415
Gln Asp Gln Ser Ile Val Arg Thr Ser Leu Ala Val Leu Gly Lys Gly
        420                 425                 430
Cys Leu Ala Ala Ser Phe Asn Cys Ile Phe Leu Tyr Thr Gly Glu Leu
        435                 440                 445
Tyr Pro Thr Met Ile Arg Gln Thr Gly Met Gly Met Gly Ser Thr Met
        450                 455                 460
Ala Arg Val Gly Ser Ile Val Ser Pro Leu Val Ser Met Thr Ala Glu
465             470                 475                 480
Leu Tyr Pro Ser Met Pro Leu Phe Ile Tyr Gly Ala Val Pro Val Ala
            485                 490                 495
Ala Ser Ala Val Thr Val Leu Leu Pro Glu Thr Leu Gly Gln Pro Leu
            500                 505                 510
Pro Asp Thr Val Gln Asp Leu Glu Ser Arg Trp Ala Pro Thr Gln Lys
        515                 520                 525
Glu Ala Gly Ile Tyr Pro Arg Lys Gly Lys Gln Thr Arg Gln Gln Gln
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Glu His Gln Lys Tyr Met Val Pro Leu Gln Ala Ser Ala Gln Glu Lys
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Asn Gly Leu
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gcagctcgga ctcagctccc ggagcaaccc agctgcggag gcaacggcag ggcctcagcc   180
ccagcgaagg acagcaggca ggcagacaga cagaggtcct gggactggaa ggcctcagcc   240
cccagccact gggctgggcc tggccca atg gcc ttt aat gac ctc ctg cag cag   294
                                Met Ala Phe Asn Asp Leu Leu Gln Gln
                                1                   5

gtg ggg ggt gtc ggc cgc ttc cag cag atc cag gtc acc ctg gtg gtc   342
Val Gly Gly Val Gly Arg Phe Gln Gln Ile Gln Val Thr Leu Val Val
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```
ctc ccc ctg ctc ctg atg gct tct cac aac acc ctg cag aac ttc act        390
Leu Pro Leu Leu Leu Met Ala Ser His Asn Thr Leu Gln Asn Phe Thr
                        30                35                40

gct gcc atc cct acc cac cac tgc cgc ccg cct gcc gat gcc aac ctc        438
Ala Ala Ile Pro Thr His His Cys Arg Pro Pro Ala Asp Ala Asn Leu
            45                50                55

agc aag aac ggg ggg ctg gag gtc tgg ctg ccc cgg gac agg cag ggg        486
Ser Lys Asn Gly Gly Leu Glu Val Trp Leu Pro Arg Asp Arg Gln Gly
        60                65                70

cag cct gag tcc tgc ctc cgc ttc acc tcc ccg cag tgg gga ctg ccc        534
Gln Pro Glu Ser Cys Leu Arg Phe Thr Ser Pro Gln Trp Gly Leu Pro
        75                80                85

ttt ctc aat ggc aca gaa gcc aat ggc aca ggg gcc aca gag ccc tgc        582
Phe Leu Asn Gly Thr Glu Ala Asn Gly Thr Gly Ala Thr Glu Pro Cys
    90                95                100               105

acc gat ggc tgg atc tat gac aac agc acc ttc cca tct acc atc gtg        630
Thr Asp Gly Trp Ile Tyr Asp Asn Ser Thr Phe Pro Ser Thr Ile Val
                110               115               120

act gag tgg gac ctt gtg tgc tct cac agg gcc cta cgc cag ctg gcc        678
Thr Glu Trp Asp Leu Val Cys Ser His Arg Ala Leu Arg Gln Leu Ala
                125               130               135

cag tcc ttg tac atg gtg ggg gtg ctg ctc gga gcc atg gtg ttc ggc        726
Gln Ser Leu Tyr Met Val Gly Val Leu Leu Gly Ala Met Val Phe Gly
            140               145               150

tac ctt gca gac agg cta ggc cgc cgg aag gta ctc atc ttg aac tac        774
Tyr Leu Ala Asp Arg Leu Gly Arg Arg Lys Val Leu Ile Leu Asn Tyr
            155               160               165

ctg cag aca gct gtg tca ggg acc tgc gca gcc ttc gca ccc aac ttc        822
Leu Gln Thr Ala Val Ser Gly Thr Cys Ala Ala Phe Ala Pro Asn Phe
170               175               180               185

ccc atc tac tgc gcc ttc cgg ctc ctc tcg ggc atg gct ctg gct ggc        870
Pro Ile Tyr Cys Ala Phe Arg Leu Leu Ser Gly Met Ala Leu Ala Gly
            190               195               200

atc tcc ctc aac tgc atg aca ctg aat gtg gag tgg atg ccc att cac        918
Ile Ser Leu Asn Cys Met Thr Leu Asn Val Glu Trp Met Pro Ile His
            205               210               215

aca cgg gcc tgc gtg ggc acc ttg att ggc tat gtc tac agc ctg ggc        966
Thr Arg Ala Cys Val Gly Thr Leu Ile Gly Tyr Val Tyr Ser Leu Gly
        220               225               230

cag ttc ctc ctg gct ggt gtg gcc tac gct gtg ccc cac tgg cgc cac       1014
Gln Phe Leu Leu Ala Gly Val Ala Tyr Ala Val Pro His Trp Arg His
    235               240               245
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ctg cag cta ctg gtc tct gcg cct ttt ttt gcc ttc ttc atc tac tcc   1062
Leu Gln Leu Leu Val Ser Ala Pro Phe Phe Ala Phe Phe Ile Tyr Ser
250   255   260   265

tgg ttc ttc att gag tcg gcc cgc tgg cac tcc tcc tcc ggg agg ctg   1110
Trp Phe Phe Ile Glu Ser Ala Arg Trp His Ser Ser Ser Gly Arg Leu
                270   275   280

gac ctc acc ctg agg gcc ctg cag aga gtc gcc cgg atc aat ggg aag   1158
Asp Leu Thr Leu Arg Ala Leu Gln Arg Val Ala Arg Ile Asn Gly Lys
            285   290   295

cgg gaa gaa gga gcc aaa ttg agt atg gag gta ctc cgg gcc agt ctg   1206
Arg Glu Glu Gly Ala Lys Leu Ser Met Glu Val Leu Arg Ala Ser Leu
        300   305   310

cag aag gag ctg acc atg ggc aaa ggc cag gca tcg gcc atg gag ctg   1254
Gln Lys Glu Leu Thr Met Gly Lys Gly Gln Ala Ser Ala Met Glu Leu
        315   320   325

ctg cgc tgc ccc acc ctc cgc cac ctc ttc ctc tgc ctc tcc atg ctg   1302
Leu Arg Cys Pro Thr Leu Arg His Leu Phe Leu Cys Leu Ser Met Leu
330   335   340   345

tgg ttt gcc act agc ttt gca tac tat ggg ctg gtc atg gac ctg cag   1350
Trp Phe Ala Thr Ser Phe Ala Tyr Tyr Gly Leu Val Met Asp Leu Gln
                350   355   360

ggc ttt gga gtc agc atc tac cta atc cag gtg atc ttt ggt gct gtg   1398
Gly Phe Gly Val Ser Ile Tyr Leu Ile Gln Val Ile Phe Gly Ala Val
            365   370   375

gac ctg cct gcc aag ctt gtg ggc ttc ctt gtc atc aac tcc ctg ggt   1446
Asp Leu Pro Ala Lys Leu Val Gly Phe Leu Val Ile Asn Ser Leu Gly
        380   385   390

cgc cgg cct gcc cag atg gct gca ctg ctg ctg gca ggc atc tgc atc   1494
Arg Arg Pro Ala Gln Met Ala Ala Leu Leu Leu Ala Gly Ile Cys Ile
        395   400   405

ctg ctc aat ggg gtg ata ccc cag gac cag tcc att gtc cga acc tct   1542
Leu Leu Asn Gly Val Ile Pro Gln Asp Gln Ser Ile Val Arg Thr Ser
410   415   420   425

ctt gct gtg ctg ggg aag ggt tgt ctg gct gcc tcc ttc aac tgc atc   1590
Leu Ala Val Leu Gly Lys Gly Cys Leu Ala Ala Ser Phe Asn Cys Ile
            430   435   440

ttc ctg tat act ggg gaa ctg tat ccc aca atg atc cgg cag aca ggc   1638
Phe Leu Tyr Thr Gly Glu Leu Tyr Pro Thr Met Ile Arg Gln Thr Gly
            445   450   455

atg gga atg ggc agc acc atg gcc cga gtg ggc agc atc gtg agc cca   1686
Met Gly Met Gly Ser Thr Met Ala Arg Val Gly Ser Ile Val Ser Pro
            460   465   470

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ctg gtg agc atg act gcc gag ctc tac ccc tcc atg cct ctc ttc atc         1734
Leu Val Ser Met Thr Ala Glu Leu Tyr Pro Ser Met Pro Leu Phe Ile
    475                     480                 485

tac ggt gct gtt cct gtg gcc gcc agc gct gtc act gtc ctc ctg cca         1782
Tyr Gly Ala Val Pro Val Ala Ala Ser Ala Val Thr Val Leu Leu Pro
490                     495                 500                 505

gag acc ctg ggc cag cca ctg cca gac acg gtg cag gac ctg gag agc         1830
Glu Thr Leu Gly Gln Pro Leu Pro Asp Thr Val Gln Asp Leu Glu Ser
                    510                 515                 520

agg tgg gcc ccc act cag aaa gaa gca ggg ata tat ccc agg aaa ggg         1878
Arg Trp Ala Pro Thr Gln Lys Glu Ala Gly Ile Tyr Pro Arg Lys Gly
            525                 530                 535

aaa cag acg cga cag caa caa gag cac cag aag tat atg gtc cca ctg         1926
Lys Gln Thr Arg Gln Gln Gln Glu His Gln Lys Tyr Met Val Pro Leu
            540                 545                 550

cag gcc tca gca caa gag aag aat gga ctc tgaggactga gaaggggcct          1976
Gln Ala Ser Ala Gln Glu Lys Asn Gly Leu
            555                 560

tacagaaccc taaagggagg gaaggtccta caggtctccg gccacccaca caaggaggag       2036
gaagaggaaa tggtgaccca agtgtggggg ttgtggttca ggaaagcatc ttcccagggg       2096
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            20                  25                  30
Ser His Asn Thr Leu Gln Asn Phe Thr Ala Ala Ile Pro Thr His His
        35                  40                  45
Cys Arg Pro Pro Ala Asp Ala Asn Leu Ser Lys Asn Gly Gly Leu Glu
    50                  55                  60
Val Trp Leu Pro Arg Asp Arg Gln Gly Gln Pro Glu Ser Cys Leu Arg
65                  70                  75                  80
Phe Thr Ser Pro Gln Trp Gly Leu Pro Phe Leu Asn Gly Thr Glu Ala
                85                  90                  95
Asn Gly Thr Gly Ala Thr Glu Pro Cys Thr Asp Gly Trp Ile Tyr Asp
            100                 105                 110
Asn Ser Thr Phe Pro Ser Thr Ile Val Thr Glu Trp Asp Leu Val Cys
            115                 120                 125
Ser His Arg Ala Leu Arg Gln Leu Ala Gln Ser Leu Tyr Met Val Gly
    130                 135                 140
Val Leu Leu Gly Ala Met Val Phe Gly Tyr Leu Ala Asp Arg Leu Gly
145                 150                 155                 160
Arg Arg Lys Val Leu Ile Leu Asn Tyr Leu Gln Thr Ala Val Ser Gly
                165                 170                 175
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Thr Cys Ala Ala Phe Ala Pro Asn Phe Pro Ile Tyr Cys Ala Phe Arg
                180   185   190
Leu Leu Ser Gly Met Ala Leu Ala Gly Ile Ser Leu Asn Cys Met Thr
        195   200   205
Leu Asn Val Glu Trp Met Pro Ile His Thr Arg Ala Cys Val Gly Thr
210   215   220
Leu Ile Gly Tyr Val Tyr Ser Leu Gly Gln Phe Leu Leu Ala Gly Val
225   230   235   240
Ala Tyr Ala Val Pro His Trp Arg His Leu Gln Leu Leu Val Ser Ala
                245   250   255
Pro Phe Phe Ala Phe Phe Ile Tyr Ser Trp Phe Phe Ile Glu Ser Ala
            260   265   270
Arg Trp His Ser Ser Ser Gly Arg Leu Asp Leu Thr Leu Arg Ala Leu
        275   280   285
Gln Arg Val Ala Arg Ile Asn Gly Lys Arg Glu Glu Gly Ala Lys Leu
        290   295   300
Ser Met Glu Val Leu Arg Ala Ser Leu Gln Lys Glu Leu Thr Met Gly
305   310   315   320
Lys Gly Gln Ala Ser Ala Met Glu Leu Leu Arg Cys Pro Thr Leu Arg
                325   330   335
His Leu Phe Leu Cys Leu Ser Met Leu Trp Phe Ala Thr Ser Phe Ala
            340   345   350
Tyr Tyr Gly Leu Val Met Asp Leu Gln Gly Phe Gly Val Ser Ile Tyr
            355   360   365
Leu Ile Gln Val Ile Phe Gly Ala Val Asp Leu Pro Ala Lys Leu Val
        370   375   380
Gly Phe Leu Val Ile Asn Ser Leu Gly Arg Arg Pro Ala Gln Met Ala
385   390   395   400
Ala Leu Leu Leu Ala Gly Ile Cys Ile Leu Leu Asn Gly Val Ile Pro
                405   410   415
Gln Asp Gln Ser Ile Val Arg Thr Ser Leu Ala Val Leu Gly Lys Gly
            420   425   430
Cys Leu Ala Ala Ser Phe Asn Cys Ile Phe Leu Tyr Thr Gly Glu Leu
        435   440   445
Tyr Pro Thr Met Ile Arg Gln Thr Gly Met Gly Met Gly Ser Thr Met
        450   455   460
Ala Arg Val Gly Ser Ile Val Ser Pro Leu Val Ser Met Thr Ala Glu
465   470   475   480
Leu Tyr Pro Ser Met Pro Leu Phe Ile Tyr Gly Ala Val Pro Val Ala
            485   490   495
Ala Ser Ala Val Thr Val Leu Leu Pro Glu Thr Leu Gly Gln Pro Leu
            500   505   510
Pro Asp Thr Val Gln Asp Leu Glu Ser Arg Trp Ala Pro Thr Gln Lys
        515   520   525
Glu Ala Gly Ile Tyr Pro Arg Lys Gly Lys Gln Thr Arg Gln Gln Gln
        530   535   540
Glu His Gln Lys Tyr Met Val Pro Leu Gln Ala Ser Ala Gln Glu Lys
545   550   555   560
Asn Gly Leu